Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) An image forming apparatus, comprising:

light emission means for emitting a light beam;

scanning control means for controlling scanning of the light beam emitted by the light emission means;

first light emission control means for controlling a light emission timing of the light emission means on the basis of a reference clock by [[a]] an auto power control timing prepared in advance;

bias current control means for controlling whether to start or stop supplying of a bias current to the light emission means at a bias current control timing prepared in advance, to control the light emission timing of the light emission means;

second light emission control means for controlling the light emission timing of the light emission means in correspondence with image data of one line in a main scanning direction on the basis of a generation timing of a horizontal sync signal corresponding to the emission of the light beam under control of the first light emission control means; and

image forming means for forming an image on the basis of the light beam scanned under control of the scanning control means in correspondence with the emission of the light beam under control of the second light emission control means;

wherein:

the image forming means selects one of a first process speed and a second process speed in a sub-scanning direction when a latent image formed in correspondence with scanning of the light beam is to be transferred to a predetermined medium;

when the first process speed is selected, the bias current control means sets a first bias current on timing and a first bias current off timing, counts an image clock corresponding to the reference clock, detects the first bias current on timing to start supplying of the bias current to the light emission means, and detects the first bias off timing to stop supplying of the bias current to the light emission means, and when the second process speed is selected, the bias current control means sets a second bias current on timing and a second bias current

off timing, counts the image clock corresponding to the reference clock, and detects the second bias current on timing to start supplying of the bias current to the light emission means, and detects the second bias off timing to stop supplying of the bias current to the light emission means; and

when the first process speed is selected, the first light emission control means sets a first auto power on timing and a first auto power off timing, counts the image clock corresponding to the reference clock to detect the first auto power on timing and the first auto power off timing, and forcibly causes the light emission means to emit light at a first period to generate the horizontal sync signal at the first period, and when the second process speed is selected, the first light emission control means sets a second auto power on timing and a second auto power off timing, counts the image clock corresponding to the reference clock to detect the second auto power on timing and the first auto power off timing, and forcibly causes the light emission means to emit light at a second period to generate the horizontal sync signal at the second period; and

the first bias current off timing and the first auto power on timing are coincident with each other, and the second bias current off timing and the second auto power on timing are coincident with each other.

2. (Cancelled).

3. (Cancelled).

4. (Cancelled).

5. (Currently amended) ~~An~~ The image forming apparatus according to claim 1, which further comprises light amount detection means for detecting a light amount of the light beam emitted by the light emission means and scanned by the scanning control means, and

in which the first light emission control means detects a timing, which is prepared in advance, on the basis of the reference clock, forcibly causes the light emission means to emit light, and controls the light amount of the light beam emitted by the light emission means to a

predetermined value on the basis of a light amount detection result by the light amount detection means corresponding to the forced light emission.

6. (Currently amended) ~~An~~ The image forming apparatus according to claim 1, which further comprises light amount detection means for detecting a light amount of the light beam emitted by the light emission means and scanned by the scanning control means, and

in which the first light emission control means counts an image clock corresponding to the reference clock to detect a light amount control start timing and a light amount control end timing, which are prepared in advance, forcibly causes the light emission means to emit light in a period of the detected light amount control start timing and light amount control end timing, and controls the light amount of the light beam emitted by the light emission means to a predetermined value on the basis of a light amount detection result by the light amount detection means corresponding to the forced light emission.

7. (Currently amended) ~~An~~ The image forming apparatus according to claim 1, wherein the first light emission control means counts an image clock corresponding to the reference clock and synchronized with the horizontal sync signal to detect a timing which is prepared in advance, and controls the light emission timing of the light emission means at the preset timing.

8. (New) An image forming apparatus, comprising:

a light emission unit that emits a light beam;

a scanning control unit that controls the scanning of the light beam emitted by the light emission unit;

a first light emission control unit that controls a light emission timing of the light emission unit on the basis of a reference clock by an auto power control timing prepared in advance;

a bias current control unit that controls whether to start or stop supplying of a bias current to the light emission unit at a bias current control timing prepared in advance, to control the light emission timing of the light emission unit;

a second light emission control unit that controls the light emission timing of the light emission unit in correspondence with image data of one line in a main scanning direction on the basis of a generation timing of a horizontal sync signal corresponding to the emission of the light beam under control of the first light emission control unit; and

an image forming unit that forms an image on the basis of the light beam scanned under control of the scanning control unit in correspondence with the emission of the light beam under control of the second light emission control unit;

wherein:

the image forming unit selects one of a first process speed and a second process speed in a sub-scanning direction when a latent image formed in correspondence with scanning of the light beam is to be transferred to a predetermined medium;

when the first process speed is selected, the bias current control unit sets a first bias current on timing and a first bias current off timing, counts an image clock corresponding to the reference clock, detects the first bias current on timing to start supplying of the bias current to the light emission unit, and detects the first bias off timing to stop supplying of the bias current to the light emission unit, and when the second process speed is selected, the bias current control unit sets a second bias current on timing and a second bias current off timing, counts the image clock corresponding to the reference clock, and detects the second bias current on timing to start supplying of the bias current to the light emission unit, and detects the second bias off timing to stop supplying of the bias current to the light emission unit; and

when the first process speed is selected, the first light emission control unit sets a first auto power on timing and a first auto power off timing, counts the image clock corresponding to the reference clock to detect the first auto power on timing and the first auto power off timing, and forcibly causes the light emission unit to emit light at a first period to generate the horizontal sync signal at the first period, and when the second process speed is selected, the first light emission control unit sets a second auto power on timing and a second auto power off timing, counts the image clock corresponding to the reference clock to detect the second auto power on timing and the first auto power off timing, and forcibly causes the light emission unit to emit light at a second period to generate the horizontal sync signal at the second period; and

the first bias current off timing and the first auto power on timing are coincident with each other, and the second bias current off timing and the second auto power on timing are coincident with each other.

9. (New) The image forming apparatus according to claim 8, which further comprises a light amount detection unit that detects a light amount of the light beam emitted by the light emission unit and scanned by the scanning control unit, and

in which the first light emission control unit detects a timing, which is prepared in advance, on the basis of the reference clock, forcibly causes the light emission unit to emit light, and controls the light amount of the light beam emitted by the light emission unit to a predetermined value on the basis of a light amount detection result by the light amount detection unit corresponding to the forced light emission.

10. (New) The image forming apparatus according to claim 8, which further comprises a light amount detection unit that detects a light amount of the light beam emitted by the light emission unit and scanned by the scanning control unit, and

in which the first light emission control unit counts an image clock corresponding to the reference clock to detect a light amount control start timing and a light amount control end timing, which are prepared in advance, forcibly causes the light emission unit to emit light in a period of the detected light amount control start timing and light amount control end timing, and controls the light amount of the light beam emitted by the light emission unit to a predetermined value on the basis of a light amount detection result by the light amount detection unit corresponding to the forced light emission.

11. (New) The image forming apparatus according to claim 8, wherein the first light emission control unit counts an image clock corresponding to the reference clock and synchronized with the horizontal sync signal to detect a timing which is prepared in advance, and controls the light emission timing of the light emission unit at the preset timing.